

## **REMARKS/ARGUMENTS**

Claims 15, 18, 19, 28, 35, 39, 46, 47, and 54 are currently amended. Applicants respectfully assert that the subject matter of the amended claims are fully supported by the specification and drawings as originally filed at least under MPEP 2163(II)(A)(3)(a) and 2181(IV), and that no new matter has been presented. Entry thereof is respectfully requested.

### **Allowable Subject Matter**

Applicants note and appreciate the allowance of claims 51, 52, and 56.

Also, the Office Action included an objection to claims 22 and 24 as being dependent upon a rejected base claim, but indicated that such claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In light of the arguments set forth below, it is respectfully submitted that Applicants' independent claim 15 is allowable. Accordingly, because dependent claims 22 and 24 are but further delineations of independent claim 15 from which they depend, the objected to dependent claims 22 and 24, by definition, are also allowable. Applicants respectfully request reconsideration and withdrawal of the objections to claims 22 and 24.

### **Objections to the Claims**

Claim 54 was objected to as being dependent on a cancelled claim. Applicants have amended claim 54 to overcome the objection. Reconsideration and withdrawal of the objection are respectfully requested.

### **Claim Rejections -35 U.S.C. § 112**

Claims 18 and 19 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants have amended claims 18 and 19 to overcome the rejection. Applicants note that the specification as originally filed did not use the terminology "about zero" but did use the terminology "near zero." Reconsideration and withdrawal of the rejection are respectfully requested.

**Claim Rejections - 35 U.S.C. § 102(b)**

Independent claims 15, 28, and 46, and dependent claims 16-21, 23, 29-34, 47-50, and 55 were rejected under 35 U.S.C. 102(b) as being anticipated by Kruger et al (WO98/45594).

Claims 15 and 28 each recite, *inter alia*, a biasing member, in a first valve configuration, permits a flap device to open when pressure within an inlet flap outer conduit reaches a first pressure, and prevents the flap device from opening until pressure within the inlet flap outer conduit reaches the first pressure, and a spool member, in a third valve configuration, directs a flow of a fluid from a valve inlet to a valve outlet when a bias force imposed by the biasing member is sufficient to prevent the flap device from opening after pressure within the inlet flap outer conduit has reached an operating pressure.

Kruger discloses in conjunction with FIGS. 2 (and 5), a control valve 10 having an actuator 21 (72) connected to a flow valve 20 (53), which is connected via a spring 12 (17) to a pressure valve 22 (51). The flow valve 20 (53) controls flow between a fuel feed 24 (35) and a fuel outlet 23 (36), and the pressure valve 22 (51) controls flow between a return line 26 (38) and a tank line 27 (37). With reference also to FIG. 4, in a neutral position S0 in which the actuator 21 (72) is de-energized, the flow valve 20 (53) is closed and the pressure valve 22 (51) is opened. When the actuator 21 (72) is energized, the flow valve 20 (53) is displaced from S0 to S1, the pressure valve 22 (51) is pretensioned with a holding force F0, and the flow valve 20 (53) opens to allow flow Q.

First, Kruger does not disclose that the spring 12 (17) permits the pressure valve 22 (51) to open in the neutral position when pressure within the return line 26 (38) reaches a first pressure, and prevents the pressure valve 22 (51) from opening until pressure within the return line 26 (38) reaches the first pressure. To the contrary Kruger specifically discloses that the pressure valve 22 (51) is open in the neutral position. "In the neutral position,...the connection between the return line 26 and the tank line 27 is opened." (Kruger Translation, page 5) "Preferably the spring 12 is made such that in the neutral position the pressure closing element 22 clears the return line 26 and the return line 26 is connected to the tank line 27." (Kruger Translation, page 6) Therefore, Kruger does not disclose a biasing member, in a first valve configuration, that permits a flap device to open when pressure within an inlet flap outer conduit reaches a first pressure, and that prevents the flap device from opening until pressure within the inlet flap outer conduit reaches the first pressure.

Second, although Kruger discloses that the flow valve 20 (53) opens at some unspecified point after the pressure valve 22 (51) becomes pretensioned, Kruger does not teach or suggest that the flow valve 20 (53) opens when a holding force on the pressure valve 22 (51) is sufficient to prevent the pressure valve 22 (51) from opening *after pressure within the return line 26 (38) has reached an operating pressure*. No such condition is taught or suggested by Kruger, and Kruger's pressure valve 22 (51) may in fact open after pressure within the return line 26 (38) reaches an operating pressure and, thus, Kruger's flow valve 20 (53) may open when Kruger's pressure valve 22 (51) is opened, for example, *before* pressure within the return line 26 (38) has reached an operating pressure. Kruger is completely silent on the aforementioned temporal limitations and does not disclose directing a flow of a fluid from a valve inlet to a valve outlet when a bias force imposed by a biasing member is sufficient to prevent a flap device from opening after pressure within an inlet flap outer conduit has reached an operating pressure.

The assertion in the Office Action that the particular aforementioned limitation is taught by Kruger is completely unsupported with any specific reference by page or line number of Kruger. Instead, on page 7 of the Office Action, it is merely opined that Kruger's electromagnet (72) can be operated to place Kruger's spool member in a third position which would increase biasing on Kruger's flap device further closed and therefore under normal operating conditions the flap device would remain closed. But nowhere does Kruger disclose that Kruger's spring force is sufficient to prevent Kruger's pressure valve from opening under an operating pressure. In fact, Kruger's pressure valve may be openable to some extent under such operating pressures for any number of reasons, and Kruger's flow valve may open before an operating pressure is reached. Thus, the assertion appears to be based on probabilities or possibilities beyond what Kruger actually discloses. To the extent the assertion is based on inherency and is maintained, documentary evidence of the currently unsupported assertion is requested as required by MPEP § 2112(IV).

For at least these reasons, Applicants respectfully submit that claims 15 and 28 recite novel and patentable subject matter and request reconsideration and withdrawal of the rejection.

Claim 46 recites, *inter alia*, a force exerting portion operable to force a flow valve to move and to increase a force applied to a pressure valve by a biasing member, but not operable to move the flow valve to such an extent that the flow valve inlet is communicated to a flow valve outlet until the force applied to the pressure valve by the biasing member is sufficient to

keep the pressure valve closed when pressure at a pressure valve inlet has reached an operating pressure.

Although Kruger discloses that the flow valve 20 (53) opens at some unspecified point after the pressure valve 22 (51) becomes pretensioned, Kruger does not teach or suggest that the flow valve 20 (53) does *not* move to such an extent that the fuel feed 24 (35) is communicated to the fuel outlet 23 (36) until a force applied to the pressure valve 22 (51) by the spring 12 (17) is sufficient to keep the pressure valve 22 (51) closed when pressure at the return line 26 (38) has reached an operating pressure. No such condition is taught or suggested by Kruger, and Kruger's flow valve 20 (53) may in fact open before a force applied to Kruger's pressure valve 22 (51) is sufficient to keep that valve 22 (51) closed when pressure within the return line 26 (38) reaches an operating pressure. Kruger is completely silent on not moving a flow valve to such an extent that a flow valve inlet is communicated to a flow valve outlet until a force applied to a pressure valve by a biasing member is sufficient to keep the pressure valve closed when pressure at a pressure valve inlet has reached an operating pressure.

The assertion in the Office Action that the particular aforementioned limitation is taught by Kruger is completely unsupported with any specific reference by page or line number of Kruger. Instead, on page 7 of the Office Action, it is merely opined that Kruger's electromagnet (72) can be operated to place Kruger's spool member in a third position which would increase biasing on Kruger's flap device further closed and therefore under normal operating conditions the flap device would remain closed. But nowhere does Kruger disclose that Kruger's flow valve is not moved to such an extent that a flow valve inlet is communicated to a flow valve outlet until a force applied to a pressure valve by a biasing member is sufficient to keep the pressure valve closed when pressure at a pressure valve inlet has reached an operating pressure. In fact, Kruger's pressure valve may be openable to some extent under such operating pressures for any number of reasons, and Kruger's flow valve may open before an operating pressure is reached. Thus, the assertion appears to be based on probabilities or possibilities beyond what Kruger actually discloses. To the extent the assertion is based on inherency and is maintained, documentary evidence of the currently unsupported assertion is requested as required by MPEP § 2112(IV).

For at least this reason, Applicants respectfully submit that claim 46 recites novel and patentable subject matter and request reconsideration and withdrawal of the rejection.

Claims 16-21, 23, 29-34, 47-50, and 55 are ultimately dependent on a respective one of independent claims 15, 28 and 46, and under principles of claim dependency, define novel and patentable subject matter for at least the foregoing reasons and for the novel subject matter disclosed therein.

For example, claims 47-50 were each rejected upon the mere conclusion that the apparatus of Kruger is somehow “capable of performing functional limitations as claimed.” However, no element in Kruger was cited nor was any explanation or rationale given as to how or why Kruger discloses the claimed invention. Thus, the rejection of claims 47-50 appears to be based on probabilities or possibilities beyond what Kruger discloses. To the extent the assertion is based on inherency and is maintained, documentary evidence of the currently unsupported assertion is requested as required by MPEP § 2112(IV). In fact, the Office Action does not adequately communicate rationale for the anticipation rejection of claims 47-50 such that all issues have not been identified early and Applicants have not been given a fair opportunity to fully reply. Any further office action should not be made final because Applicants are entitled to at least one opportunity to respond to a properly presented rejection as to claims 47-50. Applicants respectfully request, if the claims are again rejected upon Kruger, that the Office Action include, in accordance with MPEP § 2112(IV), the requisite rejection elements.

Accordingly, reconsideration and withdrawal of the rejection of claims 15-21, 23, 28-34, 46-50, and 55 under 35 U.S.C. § 102 is respectfully requested.

### **Claim Rejections - 35 U.S.C. § 103**

Claim 26 was rejected, on page 7 of the Office Action, under 35 U.S.C. 103(a) as being unpatentable over Kruger in view of Good et al. (3,193,250). Applicants note that this rejection is an apparent oversight as claim 26 has already been cancelled. Clarification is respectfully requested. Also, claims 43-45, 53, and 54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kruger in view of Good. Further, claims 35-42 rejected under 35 U.S.C. 103(a) as being unpatentable over Kruger in view of Kelly (2004/0123841).

Claims 43-45 each recite, *inter alia*, a pressure valve seat member coupled to a valve body in an axially adjustable manner to adjust a biasing force imposed by a biasing member. Claims 53 and 54 each recite, *inter alia*, a flap device part defining a flap inlet and being axially

adjustable relative to valve body inner bore such that a biasing force exerted by a biasing member may be adjusted.

As acknowledged in the Office Action, Kruger fails to teach or suggest the aforementioned limitations. And contrary to the assertion in the Office Action, Good fails to cure this deficiency of Kruger. Good teaches that a valve seat assembly 16 having a valve seat member 36 resiliently mounted within a valve body 12 to absorb impact energy when a valve 24 closes quickly against the seat member 36. Good discloses that a locking nut 32 is threaded to the valve body 12, and the valve seat member 36 is resiliently supported by spring washers 30 between the nut 32 and the seat member 36 to permit the seat member 36 to resiliently move upon impact by the valve 24.

First, although Good discloses that the seat member 36 is axially movable, nothing in Good – and certainly not the citation to col. 2, lines 45-64 – teaches or suggests that the seat member 36 is axially adjustable. Those of ordinary skill in the art will recognize the difference between a valve seat that is merely movable against a given bias force of a biasing member upon closing of a valve, and one that is adjustable to adjust a biasing force imposed by a biasing member. The former is an internal, passive characteristic whereas the latter is an external, active characteristic.

Second, if one or more of the references teach away from an applicant's claims, then the claimed invention is distinguishable over the combination of cited references and a *prima facie* case of obviousness has not been established or is rebutted. When a reference teaches away from, the proposed combination lacks predictability of results and, therefore, is nonobvious. At a minimum, to maintain a position on obviousness when references teach away, there must be some explanation as to why the teaching away effect does not outweigh factors pointing to obviousness.

Here, Good teaches that the nut 32 is a locking type of nut and, thus, Good specifically teaches away from axial adjustment of the seat assembly 16. And there is no explanation in the Office Action as to why Good's teaching away effect does not outweigh any alleged factor(s) pointing to obviousness. Thus, Applicants' claimed invention is distinguishable over any combination of references that includes Good, and the *prima facie* case, to the extent it has been made out, is rebutted.

Third, even if it were somehow desirable or possible to use Good's valve seat assembly 16 with the "head piece 45" of Kruger, the combination would not result in the subject matter of Applicants' claims 43-45, 53, and 54. At best, the combination might result in Good's locking nut 32 threaded into Kruger's high pressure feed hole 38, and Kruger's spring washers 30 disposed between the locking nut 32 and Kruger's head piece 45. Although Kruger's head piece 45 may or may not be movable at that point, the combination would still lack the head piece 45 being axially adjustable relative to Kruger's valve body 31 such that a biasing force exerted by the washers 30 may be adjusted.

Applicants submit that none of the cited references, whether taken individually or in any permissible combination, disclose the limitations of claims 43 or 53. Further, claims 44, 45, and 54 are dependent on claims 43 or 53, and under principles of dependency, contain patentable subject matter in view of the foregoing reasons and for the additional subject matter recited therein.

For example, claim 44 recites that a pressure valve seat member is threaded to a valve body. Although Good discloses that the locking nut 32 is threaded to the valve body 12, Good does not teach or suggest that the valve seat member 36 is threaded to the valve body 12 and the combination with Kruger does not cure that deficiency.

In another example, claim 45 recites that a force exerting portion is operable to force a flow valve to move and to increase a force applied to a pressure valve by a biasing member, but is not operable to move the flow valve to such an extent that a flow valve inlet is communicated to a flow valve outlet until the force applied to the pressure valve by the biasing member is sufficient to keep the pressure valve closed when pressure at a pressure valve inlet has reached an operating pressure. As set forth above with respect to claim 46, Kruger does not disclose, teach, or suggest the aforementioned claim 45 limitation, and Good does not cure this deficiency. Moreover, the rejection is incomplete because it does not set forth any of the requisite rejection elements required by MPEP § 706.02(j) as further discussed below.

In a further example, claim 54 recites that axial adjustment of a part of a flap device does not affect volumetric flow of fluid from a valve inlet to a valve outlet. The rejection is incomplete because it does not set forth any of the requisite rejection elements required by MPEP § 706.02(j) as further discussed below.

According to MPEP § 706.02(j), a complete obviousness rejection requires an Office Action to set forth the following elements:

- (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate;
- (B) the difference or differences in the claim over the applied reference(s);
- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and
- (D) an explanation as to why the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made.

Here, the Office Action does not separately set forth any of the required elements as to claims 45 or 54. Therefore, the Office Action does not present a complete obviousness rejection because it fails to comply with MPEP § 706.02(j). Thus, the Office Action does not adequately communicate rationale for the obviousness rejection such that all issues have not been identified early and Applicants have not been given a fair opportunity to fully reply. Any such further office action cannot be made final because Applicants are entitled to at least one opportunity to respond to a properly presented rejection. Applicants respectfully request, if claims 45 and 54 are again rejected upon any combination of references, that the Office Action include, in accordance with MPEP § 706.02(j), the requisite rejection elements to support the conclusion that it would have been obvious to combine the references to meet claims 45 and 54.

As to claims 35-42, it is generally asserted in the Office Action that it would have been obvious to operate Kruger's system at pressures disclosed by Kelly because those pressures are standard to a rail system. Even if that assertion were true, mere operation of Kruger's system at Kelly's disclosed pressures would not result in the subject matter of each of Applicants' claims 35-42 for at least the reasons asserted above with respect to claims 15 and 28 from which claims 35-38 and 39-42 respectively depend. Besides, the rejection of claims 35-42 does not include the requisite teachings of Kruger relied upon with reference to the relevant column or page number(s) and line number(s). Thus, the rejection is incomplete under MPEP § 706.02(j) because it does not adequately communicate rationale for the obviousness determination such that all issues have not been identified early and Applicants have not been given a fair opportunity to fully reply. Any further office action cannot be made final because Applicants are



entitled to at least one opportunity to respond to a properly presented rejection. Applicants respectfully request, if claims 35-42 are again rejected upon any combination of references, that the Office Action include, in accordance with MPEP § 706.02(j), the requisite rejection elements to support the conclusion that it would have been obvious to combine the references to meet claims 35-42.


Reconsideration and withdrawal of all of the 35 U.S.C. § 103 rejections are respectfully requested.

Applicants' counsel hereby authorizes the Examiner to charge Applicants' Deposit Account No. 50-0852 the fee for any fees due to file this Amendment.

### **Conclusion**

In view of the above amendments and remarks, Applicants respectfully request reconsideration and allowance of the claims now in the case.

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